An Verburgh, Wendy Schouteden, Jan Elen
K.U.Leuven, Belgium

Disciplinary differences and programme level differences in the prevalence of research-related educational goals in academic programmes (0055)

Programme number: I2

Research Domain: Academic Practice, Work and Cultures

The paper describes the results of an empirical study on the prevalence of research-related goals in 24 academic programmes in Belgium. For the study six research-related goals were identified (1: knowledge and insight into results of research; 2: insight into methodological and theoretical underpinnings of research; 3: development of practical research skills; 4: development of competence to be a researcher; 5: development of a critical attitude towards knowledge and knowledge construction, and 6: development of curiosity towards evolutions in the discipline). The prevalence of these goals and differences between hard and soft disciplines, between bachelor and master courses as well as between university and polytechnics courses were investigated.
The results reveal that an overall rather low prevalence of the goals, with disciplinary differences. Bachelor courses tend to score lower than master courses. Polytechnics more frequently mention research-related goals.

Aims

The current literature on higher education often makes a call for a systematic integration of research into teaching (e.g., Brew, 2006). This call is based on the assumption that such integration is beneficial to help students develop crucial competencies (e.g., research competencies and critical thinking) for the emerging knowledge society.

But the extent to which research actually gets integrated in teaching is hardly investigated (Hattie & Marsh, 1996). This study wants to contribute to the empirical research on the integration of research into teaching by investigating the prevalence of research-related educational goals in higher education programmes, as an aspect of the extent to which research gets integrated into the educational practices.

The research questions were

(1) how often are research-related educational goals mentioned in course unit descriptions, and

(2) are there differences between hard and soft disciplines, between course units programmed in bachelors or masters programmes, and between course units of university or polytechnics.

In Flanders academic programmes can be organised by universities and by polytechnics. As a consequence of the implementation of the Bologna-agreement, polytechnics have to work in cooperation with a university and the relationship between teaching and research is an important topic in the accreditation of programmes.

Methodology

In the absence of relevant established research instruments, an instrument was developed (the IRT-goal-profile, Integration of Research into Teaching)(Verburgh, Schouteden, & Elen, 2009). Six

research-related educational goals were selected (goal 1: knowledge and insight into results of research; goal 2: insight into methodological and theoretical underpinnings of research; goal 3: development of practical research skills; goal 4: development of competence to be a researcher; goal 5: development of critical attitude towards knowledge and knowledge construction, and goal 6: development of curiosity towards evolutions in the discipline). For accomplishing any of these goals, research integration is argued in the literature to be a valuable means.
With the instrument, the prevalence of these six research-related educational goals in course units descriptions is assessed. Publicly available information in the course descriptions is used as the basis to score. Hence, the instrument assesses the prevalence in the intended curriculum.
In addition to the prevalence of these goals, for each course unit the discipline was identified (hard or soft), as well as the programme level and the type of institute at which the unit was programmed. If a unit was programmed in a bachelor as well as in a master programme, it was considered as a bachelor course unit.

For each goal the Cohens' kappa is calculated, based on 213 randomly selected courses spread over 19 programmes. The interrater reliabilities calculated range between substantial to almost full agreement depending on the goal. The weighted Cohens' kappa is the lowest for goal 2, but is still substantial (.61). The other goals have interrater reliabilities between .75 and .96 (goal 1: .76, goal 3: .87, goal 4: .96, goal 5: .88, goal 6: .83).

With the instrument 24 Flemish academic bachelor and master programmes and their course units are analysed. There is a wide variety of programmes from different institutions of the Association K.U.Leuven, with an underrepresentation of university programmes.

Results

Data are analysed using MANOVA with score on goals for each course unit as dependent variables and discipline, level and institute as independent variables. Results show differences in the prevalence of the selected research-related goals in course unit descriptions. Overall the prevalence is rather low. Gaining knowledge and insight into the results of research (goal 1), the development of practical research skills (goal 3) and the development of a critical attitude (goal 5) are most common. Gaining insight into methodological and theoretical underpinning (goal 2) and the development of curiosity towards evolutions in the discipline (goal 6) are hardly mentioned.
The level of the course units (bachelor or master programme course unit), discipline and institutional type seems to be of influence. Overall, course units programmed in bachelor programmes score lower than the master programmes, except for the gaining insight into the methodological underpinnings of research (goal 2), but effect sizes are small. Course units from 'hard' disciplines tend to score for all goals, again except for gaining insight into the methodological underpinnings of research (goal 2). Effect sizes are small to moderate. Polytechnics seem to score higher than the university, except for gaining knowledge and insight into results of research (goal 1) and the development of curiosity

towards evolution in the discipline (goal 6), where they score similar. Effect sizes are moderate to large.

Educational and scientific significance

Although only the intended curriculum is investigated, this study is one of the first of its kind to shed light on the teaching-research nexus from a largely unexplored different angle. Many studies investigate perceptions of faculty, administrators or students. This study tries to grasp the prevalence of research-integration in students daily learning environment. Moreover, it reveals that, at least at the level of course unit description, attention for research-related educational goals is not as apparent as one would expect based on the importance that most lecturers' state to attach to the integration of research into teaching (Durning & Jenkins, 2005). Maybe lecturers consider the pursuit of research-related goals as so obvious that they do not feel the need to express it in the course descriptions.

The differences, based on ongoing analyses, indicate some unexpected directions, such as the higher score for polytechnics than universities. Further research is needed to explore these issues.

Reference List

Brew, A. (2006). *Research and teaching: beyond the divide*. Hampshire: Palgrave Macmillan.

Durning, B., & Jenkins, A. (2005). Teaching/Research Relations in Departments: The Perspectives of Built Environment Academics. *Studies in Higher Education, 30,* 407-426.

Hattie, J., & Marsh, H. W. (1996). The Relationship Between Research and Teaching: A Meta-Analysis. *Review of Educational Research, 66,* 507-542.

Verburgh, A., Schouteden, W., & Elen, J. (2009, August). *A look at the prevalence of research-related educational goals in educational programmes of higher education*. Paper to be presented at bi-annual meeting of EARLI, Amsterdam, The Netherlands.